1. What does an empty dictionary's code look like?

2. What is the value of a dictionary value with the key 'foo' and the value 42?

3. What is the most significant distinction between a dictionary and a list?

4. What happens if you try to access spam['foo'] if spam is {'bar': 100}?

5. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?

6. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.values()?a

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

8. How do you "pretty print" dictionary values using which module and function?

# An empty dictionary can be created using curly braces

empty\_dict = {}

# Or using the dict() constructor

empty\_dict = dict()

1. An empty dictionary's code is simply a pair of curly braces: **{}**.
2. The value of a dictionary value with the key 'foo' and the value 42 is simply 42. It can be accessed using the key 'foo' like this: **my\_dict['foo']**, where **my\_dict** is the dictionary.
3. The most significant distinction between a dictionary and a list is that a dictionary stores items as key-value pairs, while a list stores items as a sequence of values. In other words, a dictionary maps keys to values, whereas a list simply contains a sequence of values.
4. If you try to access **spam['foo']** when **spam** is **{'bar': 100}**, a **KeyError** will be raised since the key **'foo'** does not exist in the dictionary.
5. There is no difference between the expressions **'cat' in spam** and **'cat' in spam.keys()**. Both expressions check if the string **'cat'** is a key in the dictionary **spam**.
6. The expression **'cat' in spam** checks if the string **'cat'** is a key in the dictionary **spam**, while the expression **'cat' in spam.values()** checks if the string **'cat'** is a value in the dictionary **spam**. If you want to check if a value exists in a dictionary, you need to use the **values()** method to get a list of all the values in the dictionary and then check if the value exists in that list.
7. A shortcut for the given code is: **spam.setdefault('color', 'black')**. This will check if the key **'color'** exists in the dictionary **spam**, and if it does not, it will add the key with the value **'black'**.
8. The module used for pretty printing dictionary values is **pprint** and the function is **pprint()**. It can be used like this:

import pprint

my\_dict = {'key1': 'value1', 'key2': 'value2', 'key3': {'nested\_key': 'nested\_value'}}

pprint.pprint(my\_dict)

This will print the dictionary in a more readable format, with nested dictionaries indented and aligned.